

Commonwealth of Kentucky
Division for Air Quality
PERMIT STATEMENT OF BASIS

Conditional Major Draft Permit No. F-00-019

PITTSBURG TANK & TOWER Co., INC.

LOTS 5 & 6 OF HENDERSON CORPORATE INDUSTRIAL PARK, COMMONWEALTH DRIVE,
HENDERSON, KY

February 14, 2001

KEITH METZKER, REVIEWER

AFS Plant I.D. # 21-101-00132

Application Log # G736

SOURCE DESCRIPTION:

Pittsburg Tank & Tower Company, Inc. at Lots 5 & 6 on Commonwealth Drive in Henderson has applied to the Division for Air Quality to construct/operate a facility primarily for fabrication of steel water storage tanks. Activities performed at this facility will include painting surface preparation of tank sections using metallic abrasive blasting in one building and primer or paint application in another building. The source will be conditional major for VOC, individual HAP, and combined HAPs.

There are 2 other similar facilities also know as Pittsburg Tank & Tower Company, Inc. within Henderson County. Because of the close proximity and the common ownership of the facilities, the division questioned if the facilities should be treated as 1 source with potential applicability of 401 KAR 51:017, Prevention of significant deterioration of air quality. After learning that the facilities are not on adjacent property and do not support one another (according to information obtained over the phone from Mr. Don McConnell), the division believes that the 3 facilities may be permitted separately without circumvention of 401 KAR 51:017. This belief was further confirmed through the opinion of Mr. Jim Little of the U.S. EPA. Therefore, the facility located at lots 5 & 6 on Commonwealth Drive in Henderson will be the sole subject of this review.

COMMENTS:

Type of control and efficiency

EP01 is an abrasive blasting area for the removal of welding slag and surface rust from tank sections.

A large enclosed building, a floor reclaim system, and a 8,900 cfm dust collector are used to control particulate matter emissions.

The building has been assumed to capture 100% of the particulate matter from the process.

Based on information provided in the sources application, 0.5% of the shot material used does not get reclaimed and therefore has been assumed to be the uncontrolled emission.

All of the uncontrolled emission has been assumed to be captured by the dust collection system.

Based on the source's application, 99.999% control efficiency has been assumed for the dust collection system (Devices of this kind commonly achieve 99+%. Since there is no significant difference in emission fees or compliance demonstration, the division has not pursued verification of the control efficiency).

COMMENTS:

Type of control and efficiency (continued)

EP02 is a building with an airless spray gun used for painting and priming tank sections.

The building has been assumed to capture 100% of the particulate emissions.

Four 3' wide x 80' long exhaust pits using a polyester diffusion media or equivalent is used to control particulate emissions.

The source has provided manufacturer data that estimates the control efficiency of the diffusion media at 99.99%. Therefore, the particulate matter control efficiency has been assumed to be 99.99%.

Transfer efficiency has been assumed to be 75% because of the type of gun used and the size of the items painted. The large transfer efficiency has the effect of reducing PM emissions.

No VOC controls are present.

EP03 is cutting and welding activities.

No controls are present.

Emission factors and their source

At EP01, 0.5% of the blasting material used has been assumed to be the uncontrolled emission factor because the source has asserted that 0.5% is all the blasting material that will be lost after 200 cycles. This assumption has been compared to data from AP-42 Chapter 13.2.6. The direct comparison between AP-42 and the source's estimate is not obvious but the controlled AP-42 emission factor still demonstrates compliance with the particulate matter emission limitations in 401 KAR 59:010. Because compliance is demonstrated using either estimate and the AP-42 emission factor is so uncertain, the division will accept the source's estimate for particulate matter emissions from EP01 but the division may require further verification of the particulate matter emission rate at a latter date if inspections or other relevant information warrant.

At EP02, if a pollutant is used, it has been assumed to be emitted unless recovered. Transfer efficiency and add on controls are the only other reductions to spraying emissions. A transfer efficiency of 75% was assumed based on the source's application despite similar reviews by the division estimating 65% transfer efficiency since there is no significant difference for compliance with limits in 401 KAR 59:010. If inspections or other relevant information warrant, the transfer efficiency should be reevaluated.

At EP03, the source has not provided any details. Therefore, the division has assumed that electrode type E11018 is being used and that the AP-42 emission factor of 57.0 lbs of PM/1000 lbs of electrode consumed applies.

Applicable regulations

40 CFR 64.1-10, Compliance Assurance Monitoring (CAM), does not apply since the source has not been required to obtain a part 70 permit.

EP01, EP02, and EP03 are subject to 401 KAR 59:010, New process operation, because all units will commence after July 2, 1975.

401 KAR 59:225, New miscellaneous metal parts and products surface coating operations, does not apply to EP02 because the source has taken permit limitations to remain below the regulation emission trigger level.

COMMENTS:**Applicable regulations (continued)**

EP02 is not subject to 40 CFR 63 Subpart B, Requirements for control technology determinations for major sources in accordance with Clean Air Act Sections, Sections 112(g) and 112(j), because limits have voluntarily been accepted to preclude applicability.

PERIODIC MONITORING:

EP01 is controlled by a dust collection system and when operated as designed there is little chance of violating mass or opacity standards. Since the dust collection system is so effective, direct measurements of mass and opacity emissions have not been required but some assurance that the collection system is working properly has been required. Monitoring of a magnehelic gage will be used to help assure proper operation of the dust collection system. By monitoring pressure drop once per shift (little change is expected over a shift), clogging and holes can be detected and proper operation is a reasonable assumption.

Additionally, the doors must be shut during blasting so that the emissions will go to the collection system. However, closing the building doors is a logical step in the process and no monitoring will therefore be required on the doors (the doors will be assumed to be closed unless the source reports the doors open, an inspection notes the doors open, or other credible evidence so indicates).

Given the control device used (filters) at EP02, there is little chance of violating a mass or opacity standard.

For this reason, direct measurements of mass and opacity emissions will not be required but some assurance that the filters are working properly will be needed. First, the emissions must be captured. If the doors are closed all the emissions have been assumed to be captured. Again, this is a logical step and will therefore require no monitoring. Once the emissions have been captured, the filters will assure compliance with mass and opacity standards at EP02. If the filters are inspected to determine if replacement is needed each day when painting is done, there is little chance that the filters won't work.

Due to the nature of the activities at EP03 no monitoring will be required except for raw material usage.

Cutting and welding emissions should cause little opacity and PM emissions should be below allowable levels.

EMISSION AND OPERATING CAPS DESCRIPTION:

Pittsburg Tank & Tower has requested conditional major limits on VOC, individual HAPs, and combined HAPs. In order to allow for monthly record keeping and semi-annual reporting, limits of 90 tons per year, 9.0 tons per year, and 22.5 tons per year, respectively, have been permitted. [Higher limits are permissible but they will require more record keeping and reporting and therefore have not been opted for.](#)

CREDIBLE EVIDENCE:

This permit contains provisions which require that specific test methods, monitoring or record keeping be used as a demonstration of compliance with permit limits. On February 24, 1997, the U.S. EPA promulgated revisions to the following federal regulations: 40 CFR Part 51, Sec. 51.212; 40 CFR Part 52, Sec. 52.12; 40 CFR Part 52, Sec. 52.30; 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12, that allow the use of credible evidence to establish compliance with applicable requirements. At the issuance of this permit, Kentucky has not incorporated these provisions in its air quality regulations.